

REMARKS/ARGUMENTS

Prior to entry of the present amendment, claims 1-4, 6-9, 11 and 13-17 are pending in the present application. Claims 1-3, 6-9, 11 and 15-17 have been amended to more clearly recite the present invention. Claims 5, 10, 12 and 18 remain withdrawn. In the event any generic claims are found to be allowable, and these withdrawn claims rejoined, these withdrawn claims will be amended in a similar fashion. Claims 19-23 have been added. Claim 1 is the sole independent claim. No new matter has been added.

The Examiner's indication that the certified copies of the foreign priority documents have been received is gratefully acknowledged.

The consideration of the Information Disclosure Statement filed on September 12, 2003, is gratefully acknowledged.

In connection with the next Office action, the Examiner is requested to indicate whether the drawings filed on September 12, 2003, are acceptable.

Claims 1-4, 6-9, 11, 13-17 and 19-23 are presented to the Examiner for further or initial consideration on the merits.

A. Introduction

In the outstanding Office action dated March 22, 2005, the Examiner objected to the drawings, rejected claims 1-4, 6-9, 11, 13 and 15-16 under the second paragraph of 35 U.S.C. § 112, rejected claims 1-4 under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art shown in FIG. 3 ("the AAPA") in view of U.S. Patent No. 3,638,156 to West ("the West reference"), and rejected claims 6-9, 11, 13 and 15-17 under 35 U.S.C. § 103(a) as being unpatentable over the AAPA in view of the West reference, further in view of U.S. Patent No. 6,445,271 to Johnson ("the Johnson reference").

B. Asserted Objection to the Drawings

In the outstanding Office action, the Examiner objected to the drawings as failing to illustrate the vertical spiral structure of each unit inductor recited in the claims. The claims have been amended to eliminate this term and more clearly define the present invention as shown in the drawings, rendering this objection moot. Therefore, it is respectfully requested that this objection be withdrawn.

C. Asserted Indefiniteness Rejection

In the outstanding Office action, the Examiner rejected claims 1-4, 6-9, 11, 13 and 15-16 under the second paragraph of 35 U.S.C. § 112 as being indefinite. The claims have been amended to more clearly recite the present invention, particularly with respect to the vertical spiral structure. The term “inverted trapezoid” is intended to mean a four sided structure with two opposing parallel sides and two opposing unparallel sides, where a longer parallel side is to be at a top of the structure, and a shorter parallel side is to be at a bottom of the structure. It is believed this has been further clarified with the amendment to claim 1. Claims 6 and 15-17 have been amended to more clearly recite the multi-layer metal layers of embodiment of the present invention.

Therefore, it is respectfully requested that this rejection be withdrawn.

D. Asserted Obviousness Rejections

In the outstanding Office action, the Examiner rejected claims 1-4 under 35 U.S.C. § 103(a) as being unpatentable over the AAPA in view of the West reference and rejected claims 6-9, 11, 13 and 15-17 under 35 U.S.C. § 103(a) as being unpatentable over the AAPA in view of the West reference, further in view of the Johnson reference.

As noted above, the claims have been amended to more clearly recite the present invention. It is respectfully submitted that these amended claims define the present invention over the applied art for at least the reasons set forth below.

Claim 1 has been amended to recite that, in a vertical cross-section, the width of the unit inductor increases from a bottom surface to a top surface, that the unit inductor includes a top metal layer across the top surface, and that unit inductors are connected in a direction perpendicular to the top metal layer, as can be seen, for example, in FIGS. 4 and 7 of the original application.

The AAPA does not disclose or suggest the vertical cross-section, the top metal layer or the connection between unit inductors as recited in claim 1. The West reference, relied on for the inverted trapezoid cross-section, fails to disclose or suggest the top metal layer or the connection between unit inductors as recited in claim 1. Additionally, the Johnson reference, relied on as teaching conductive plugs, further fails to disclose or suggest these features.

Therefore, it is respectfully submitted that neither the AAPA, the West reference nor the Johnson reference, either alone or in combination, disclose or suggest the present invention as recited in claim 1. The remaining rejected claims depend, either directly or indirectly from claim 1, and are believed to be allowable for at least the reasons set forth above. Therefore, it is respectfully requested that these rejections be withdrawn.

E. New Claims

Claims 19-23 have been added to recite additional details of the present invention. These claims depend, either directly or indirectly, from claim 1, and are similarly believed to be allowable for at least the reasons set forth above.

F. Conclusion

Since the cited prior art references neither anticipate nor render obvious the subject invention as presently claimed, applicants respectfully submit that claims 1-4, 6-9, 11, 13-17 and 19-23 are now in condition for allowance, and a notice to that effect is respectfully requested. It is further respectfully requested that the withdrawn claims be rejoined.


If the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

In view of the foregoing amendments and remarks, reconsideration of this application is earnestly solicited, and an early and favorable further action upon all the claims is hereby requested.

Respectfully submitted,

LEE & MORSE, P.C.

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Eugene M. Lee, Reg. No. 32,039

LEE & MORSE, P.C.
1101 WILSON BOULEVARD, SUITE 2000
ARLINGTON, VA 22209
703.525.0978 TEL
703.525.4265 FAX

PETITION and
DEPOSIT ACCOUNT CHARGE AUTHORIZATION

This document and any concurrently filed papers are believed to be timely. Should any extension of the term be required, applicant hereby petitions the Director for such extension and requests that any applicable petition fee be charged to Deposit Account No. 50-1645.

If fee payment is enclosed, this amount is believed to be correct. However, the Director is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-1645.

Any additional fee(s) necessary to effect the proper and timely filing of the accompanying-papers may also be charged to Deposit Account No. 50-1645.